

REMARKS

This is in response to the Office Action dated February 4, 2003. New claims 17-20 have been added. Thus, claims 1-11 and 14-20 are now pending. Attached hereto is a marked-up version of the changes made to the claim(s) by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made.**"

For purposes of example, and without limitation, certain example embodiments of this invention relate to a coating liquid to be used in an *inkjet head* for depositing an organic layer of an LED. The instant specification explains that conventional *spin coating of such organic layers of LEDs is problematic* in that patterning is very difficult. In order to solve this problem, certain example embodiments of the instant invention utilize *inkjet* deposition of the coating liquid to form the organic LED layer. Moreover, the instant inventor has found that the use of organic material(s) having a weight-average molecular weight less than 600,000 (more preferably from 20,000 to 100,000) and a viscosity of 62 mPa·s or less at 20 degrees C (more preferably no greater than 10 mPa·s, and most preferably from 2-6 mPa·s) is particularly advantageous in that *inkjet head clogging can be reduced/prevented*.

Claim 1 stands rejected under 35 U.S.C. Section 102(b) as being allegedly anticipated by Ueda. This Section 102(b) rejection is respectfully traversed for at least the following reasons.

Claim 1 requires a "coating liquid for forming an organic LED layer which is used for forming an organic LED layer of an organic LED device by an inkjet method, comprising at least: a solvent, and an organic material having a weight-average molecular

weight less than 600,000." As explained above, the instant inventor has surprisingly found that the claimed weight-average molecular weight less than 600,000 allows inkjet head clogging to be significantly reduced. The cited art fails to disclose or suggest the aforesaid underlined combination required by claim 1.

Ueda discloses a method of forming an EL device including a light emitting layer and/or a transport layer using a *spin coating* technique (e.g., col. 15, lines 47-50; col. 19, line 49) [the instant specification explains that spin coating is problematic as mentioned above]. The organic polymeric fluorescent substance in the liquid used for forming such an organic layer may have a molecular weight of from 10^3 to 10^7 , calculated as polystyrene (e.g., col. 14, lines 39-42). While a portion of this molecular weight range does appear to overlap with a portion of the claimed range, Ueda clearly fails to disclose or suggest the claimed inkjet technique. In fact, the coating liquids of Examples 1-4 of Ueda (all Examples of Ueda's alleged invention) could not be used in an inkjet deposition system with an inkjet head. In particular, Examples 1-4 of Ueda use *toluene* as a main solvent (e.g., col. 19, lines 24 and 48; col. 21, line 51; and col. 22, line 12). Toluene as a solvent has a vapor pressure of 27 mmHg at 20 degrees C. Thus, clogging would likely result if this was used in an inkjet head due to volatilization of toluene, in view of the high vapor pressure thereof. Thus, it can be seen that all examples of Ueda could not even be used in an inkjet system as required by claim 1. To summarize, not only does Ueda fail to disclose or suggest the claimed coating liquid for use in an inkjet deposition system, but Ueda teaches directly away from the invention of claim 1 by disclosing in its

examples coatings which cannot be used in the claimed inkjet system. Claim 1 is not anticipated.

Claim 14 requires coating liquid for forming an organic LED layer via an inkjet deposition technique using an inkjet head. As explained above, not only does Ueda fail to disclose or suggest this aspect of claim 14, but all examples in Ueda cannot be used in the claimed inkjet deposition technique.

Claims 17-18 requires a coating liquid for use in an inkjet deposition technique, and further requires a viscosity of 62 mPa's or less at 20 degrees C. As explained above, Ueda fails to disclose or suggest the claimed liquid for use in an inkjet deposition technique. Additionally, Ueda fails to disclose or suggest the claimed viscosity of 62 mPa's or less at 20 degrees C that is required by claims 17-18. This viscosity is clearly not inherent in Ueda.

Claims 19-20 require that the solvent comprises at least one solvent having a vapor pressure of 10 mmHg or less at 20 degrees C. Ueda fails to disclose or suggest this aspect of claims 19-20. Instead, as explained above, Ueda's examples teaches directly away from this aspect of claims 19-20 since Ueda's toluene as a solvent has a vapor pressure of 27 mmHg at 20 degrees C – well above the claimed "10 mmHg or less" required by claims 19-20. Ueda is entirely unrelated to the inventions of claims 19-20. Claim 7 also clearly defines over Ueda in this respect.

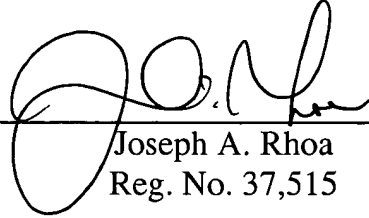
For at least the foregoing reasons, it is respectfully requested that all rejections be withdrawn. All claims are in condition for allowance. If any minor matter remains to be resolved, the Examiner is invited to telephone the undersigned with regard to the same.

FUJITA
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Respectfully submitted,

NIXON & VANDERHYTE P.C.

By: _____



Joseph A. Rhoa
Reg. No. 37,515

JAR:caj
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

1. (*Unamended*) A coating liquid for forming an organic LED layer which is used for forming an organic LED layer of an organic LED device by an inkjet method, comprising at least:

a solvent and

an organic material having a weight-average molecular weight less than 600,000.

14. (*Amended*) A coating liquid for forming an organic LED layer via an inkjet deposition technique using an inkjet head, wherein the LED layer [which]is used in an organic LED, the coating liquid comprising:

a solvent; and

an organic material having a weight-average molecular weight less than 600,000.

Please add the following new claims:

17. (*New*) A coating liquid for forming an organic LED layer which is used for forming an organic LED layer of an organic LED device by an inkjet method, wherein the inkjet method uses an inkjet head to deposit the coating liquid, comprising:

a solvent;

an organic material having a weight-average molecular weight less than 600,000;
and

wherein the coating liquid has a viscosity of 62 mPa·s or less at 20 degrees C.

18. (New) A coating liquid for forming an organic LED layer using an inkjet head for depositing the coating liquid, where the LED layer is used in an organic LED, the coating liquid comprising:

a solvent;

an organic material having a weight-average molecular weight less than 600,000;
and

wherein the coating liquid has a viscosity of 62 mPa·s or less at 20 degrees C.

19. (New) A coating liquid for forming an organic LED layer which is used for forming an organic LED layer of an organic LED device by an inkjet method, wherein the inkjet method uses an inkjet head to deposit the coating liquid, comprising:

a solvent;

an organic material having a weight-average molecular weight less than 600,000;
and

wherein the solvent comprises at least one solvent having a vapor pressure of 10 mmHg or less at 20 degrees C.

20. (New) A coating liquid for forming an organic LED layer to be used in an organic LED, the coating liquid comprising:

a solvent;

an organic material having a weight-average molecular weight less than 600,000;

and

wherein the solvent comprises at least one solvent having a vapor pressure of 10 mmHg or less at 20 degrees C.